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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.       | CONFIRMATION NO.       |
|---|-------------|----------------------|---------------------------|------------------------|
| 10/798,422  | 03/12/2004  | Seiji Horino         | Q79112                    | 6553                   |
| 23373   | 7590        | 01/25/2008           |                           |                        |
| SUGHRUE MION, PLLC<br>2100 PENNSYLVANIA AVENUE, N.W.<br>SUITE 800<br>WASHINGTON, DC 20037 |             |                      | EXAMINER<br>ROJAS, OMAR R |                        |
|   |             |                      | ART UNIT<br>2874          | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>01/25/2008   | DELIVERY MODE<br>PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                               |                               |  |
|------------------------------|-------------------------------|-------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/798,422 | Applicant(s)<br>HORINO ET AL. |  |
|                              | Examiner<br>Omar Rojas        | Art Unit<br>2874              |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 31 December 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 7-31, 46 and 48 is/are allowed.
- 6) ☒ Claim(s) 32-45 and 47 is/are rejected.
- 7) ☒ Claim(s) 49 and 50 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u>             |

Continuation of Attachment(s) 6). Other: Detailed Action, References N & O.

## **DETAILED ACTION**

### ***Response to Amendment***

1. With regards with the amendment filed 12/31/2007, all the requested changes to the claims have been entered. Claims 1-5 and 7-50 are pending.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 32-45 and 47 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. **Claims 32-38, 40, 43, and 47 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 2003-014974 A to Saito et al. ("Saito").**

*In re* claim 32, Saito discloses an optical fiber fixing system (Figures 6-15) for fixing an optical fiber comprising:

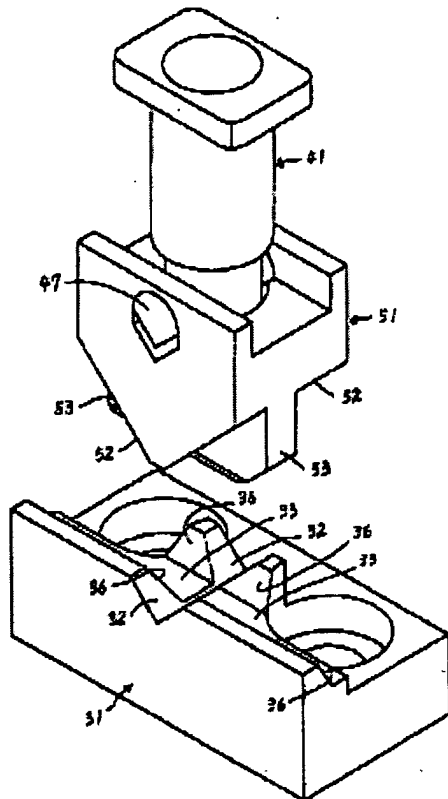
a fixing body **31** comprising a first groove **32** formed in a first surface thereof, and a second groove **33** formed in a second surface parallel to the first surface, both grooves extending in a direction capable of supporting the optical fiber **7** along its axial direction; and

a pressing body **51** comprising a planar clamp portion **53** facing the first surface of the fixing body, and a guide portion **52** facing the second surface of the fixing body and comprising two sloped portions capable of interfacing with the second groove **33** to align the optical fiber therein,

wherein the planar clamp portion 53 is in contact with a portion of the optical fiber 7 arranged in the first groove 32. Figure 11 of Saito is reproduced below.

【図11】

■10の図(a)の位置の断面図



In re claims 33-35, 37, 38, 40, and 43, the additional limitations are clearly apparent from Figures 6 to 15 of Saito.

In re claims 36 and 47, these limitations have not been given patentable weight because base claim 36 sets forth a variable condition, i.e. "when the optical fiber is supported in the first and second grooves". Therefore, the limitations of claims 36 and 47 are considered optional and have not been given patentable weight.

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. **Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito as applied to claim 32 above, and further in view of Patent No. 5,993,070 to Tamekuni et al. ("Tamekuni"). The Tamekuni patent has been made of record in a previous Office action.**

*In re* claim 39, Saito only differs from the claim in that a trapezoid-shape is not explicitly disclosed. Tamekuni discloses that V-shaped and trapezoidal-shaped grooves are equivalent structures for holding optical fibers (Tamekuni, column 7, lines 50-62). Interchanging equivalent structures is generally a matter of obvious design choice. Therefore, it would have been obvious to one of ordinary skill at the time of the claimed invention to obtain the invention specified by claim 39 in view of Saito combined with Tamekuni.

7. **Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito as applied to claim 32 above.**

*In re* claims 41 and 42, Saito only differs from the claims in that forming the pressing body of either ceramic or metal is not disclosed (note: the protrusion is part of pressing body in Saito). However, ceramic and metal were well-known materials used in optical fiber fixing systems at the time of the claimed invention. It would have been desirable to choose ceramic or metal to form the pressing body of Saito in order to obtain added strength, durability, and/or ease of manufacturing. Therefore, it would have also been obvious to one of ordinary skill in the art at

the time of the claimed invention to obtain the invention specified by claims 41 and 42 in view of Saito.

**8. Claims 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito as applied to claim 32 above and further in view of applicant's Admitted Prior Art ("APA").**

*In re* claims 44 and 45, Saito only differs from the claims in that Saito does not disclose a pair of his optical fiber fixing systems for respectively fixing a pair of optical fibers set up at an equal distance from a butting section and fusion-splicing the optical fibers. APA, as seen in Figure 1 of the application drawings, discloses a pair of optical fiber fixing systems 105 for respectively fixing a pair of optical fibers 103 set up at an equal distance from a butting section 107 and fusion-splicing the optical fibers (see paragraph [06] of the specification). The motivation for combining APA with Saito would have been to increase the transmission distance in Saito by splicing additional optical fiber using a known optical fiber fusion-splicing technique from the prior art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to obtain the invention specified by claims 44 and 45 in view of Saito combined with APA.

***Allowable Subject Matter***

9. Claims 1-5, 7-31, 46, and 48 are allowed.

10. Claims 49 and 50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The following is an examiner's statement of reasons for allowance:

Regarding claims 1-5, 7-31, 46, and 48, the primary reason for allowance of the claims is the inclusion of the fixing body further comprises a second groove, formed in a second surface thereof, shaped to support the optical fiber; the second groove extends in the first direction laterally adjacent to the first groove so that both the first and second grooves can axially support the optical fiber simultaneously; and the second surface of the fixing body is arranged above, and laterally adjacent to, the first surface of the fixing body to form a stepped structure as recited by independent claim 1.

12. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 49, the primary reason for indicating allowable subject matter is the inclusion of the sloped portions of the guide portions protrude into the second groove to align the optical fiber therein.

Regarding claim 50, the primary reason for indicating allowable subject matter is the inclusion of the optical fiber is positioned within the first and second grooves of the fixing body.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. JP 2004004350 A discloses an optical fiber fixing device bearing a remarkable similarity to the claimed invention.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (571) 272-2357. The examiner can normally be reached on Monday-Friday (9:00PM-5:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick, can be reached on (571) 272-2344. The official facsimile number for regular and After Final communications is (571) 273-8300. The examiner's RightFAX number is (571) 273-2357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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10/798,422  
Art Unit: 2874

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/Omar Rojas/  
Patent Examiner, Art Unit 2874

or  
January 10, 2008



SUNG PAK  
PRIMARY EXAMINER